

# SEQUENCE LISTING

<110> Ritchie, Steven W.  
Bruce, Wesley B.

<120> MAIZE METALLOTHIONEIN GENE AND PROMOTER

<130> 35718/271431

<150> 09/520,268

<151> 2000-03-07

<150> 60/123,510

<151> 1999-03-08

<160> 18

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 747

<212> DNA

<213> Zea mays

<220>

<221> promoter

<222> (1)...(747)

<223> Promoter sequence for maize metallothionein

<400> 1

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aagcggataa	cgtttttaa	ac	tggaacaat	atctagctgt	ttcaaattca	120
gctacgccta	cgcgccctgg	acggcgtgta	aagagccagc	atcggcacat	ttgtcaaacg	180
atcgacaagg	ccaagaaatt	ccaaatata	tattaataaa	aaagaaggca	caaattagtt	240
tggtttttta	gtatgtgtgg	cggaggaaat	tttgagaacg	aacgtatcaa	agaaggcaca	300
agacgatata	gattgacgcg	gctagaagtt	gcagcaagac	agtgggtacg	gtccttatata	360
tcctaataaa	taaaaaataa	aactatagtg	tggtcaaatgt	caacaagagg	aggaggcagc	420
caaattagca	gagggagaca	agtagagcac	gccttattag	cttgcttatt	tatcgtggtg	480
gtgtacttgt	taattactgg	cacgcattat	caacaacgca	gttctggatg	tgaatctaga	540
caaacatttg	tctaggttcc	gcacgtatag	tttttttcct	cttttttttg	gggggggggt	600
gggggggggga	acggaagctg	taataaacgg	tactaggaac	gaaagcaacc	gccgcgcgca	660
tggtttttgca	atagattacg	gtgaccttga	tgaccaccg	cgtgctataa	aaaccagtgt	720
ccccgagtct	actcatcaac	caatcca				747

<210> 2

<211> 612

<212> DNA

<213> Zea mays

<220>

<221> CDS

<222> (69)...(308)

<223> Coding sequence for maize metallothionein

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ggtcgagg atg tct tgc agc tgc gga tca agc tgc aac tgc gga tca agc 110  
Met Ser Cys Ser Cys Gly Ser Ser Cys Asn Cys Gly Ser Ser  
1 5 10

tgc aag tgc ggc aag atg tac cct gac ctg gag gag aag agc ggc ggg 158  
Cys Lys Cys Gly Lys Met Tyr Pro Asp Leu Glu Glu Lys Ser Gly Gly  
15 20 25 30

ggc gct cag gcc agc gcc gcc gcc gtc gtc ctc ggc gtt gcc cct gag 206  
Gly Ala Gln Ala Ser Ala Ala Ala Val Val Leu Gly Val Ala Pro Glu  
35 40 45

acg aag aag gcg gcg cag ttc gag gcg gcg ggc gag tcc ggc gag gcc 254  
Thr Lys Lys Ala Ala Gln Phe Glu Ala Ala Gly Glu Ser Gly Glu Ala  
50 55 60

gct cac ggc tgc agc tgc ggt gac agc tgc aag tgc agc ccc tgc aac 302  
Ala His Gly Cys Ser Cys Gly Asp Ser Cys Lys Cys Ser Pro Cys Asn  
65 70 75

tgc tga tcctgctgcg ttgtttcgtt tgcggcatgc atggatgtca cctttttttt 358  
Cys \*

actgtctgct ttgtgcttgt ggcgtgtcaa gaataaaagga tggagccatc gtctgggtctg 418  
actctggctc tccgccatgc atgcttggtg tcggttctgt tgtgcttgtg ttggtgcatg 478  
taatcgatg gcatcggtac acaccatgca tctctgatct ctttgcgcca gtgtgtgtga 538  
ctatgtccct gtaacgattg gctcagtgat tgaatatata tacaatactg ttttactaaa 598  
aaaaaaaaaaaa 612

<210> 3  
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<212> PRT  
<213> Zea mays

<400> 3  
Met Ser Cys Ser Cys Gly Ser Ser Cys Asn Cys Gly Ser Ser Cys Lys  
1 5 10 15  
Cys Gly Lys Met Tyr Pro Asp Leu Glu Glu Lys Ser Gly Gly Gly Ala  
20 25 30  
Gln Ala Ser Ala Ala Ala Val Val Leu Gly Val Ala Pro Glu Thr Lys  
35 40 45  
Lys Ala Ala Gln Phe Glu Ala Ala Gly Glu Ser Gly Glu Ala Ala His  
50 55 60  
Gly Cys Ser Cys Gly Asp Ser Cys Lys Cys Ser Pro Cys Asn Cys  
65 70 75

<210> 4  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Gene specific synthetic primer for MT promoter

# isolation

<400> 4	
atcttgccgc acttgacgct tgatcc	26
<210> 5	
<211> 24	
<212> DNA	
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<223> Gene specific primer for MT promoter isolation	
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cagttgcagc ttgatccgca gctg	24
<210> 6	
<211> 21	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Gene specific primer for MT promoter isolation	
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caggatcctc gacctctttc g	21
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<211> 255	
<212> DNA	
<213> Zea mays	
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cttgcaactg cggatcaagc tgcggctgcg gctcaagctg caagtgcggc aagaagtacc	60
ctgacctgga ggagacgagc accgccgcgc aggccaccgt cgtcctcggc gtggcccccg	120
agaagaaggc cgcgcccagag ttcgtcgagg ccgcggcgga gtccggcgag gccgcccacg	180
gctgcagctg cgggtggcaac tgcaagtgcg acccctgcaa ctgctgatca catcgatcga	240
cgaccatgga tatga	255
<210> 8	
<211> 255	
<212> DNA	
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ctgcggatca agctgcaact gcggatcaag ctgcaagtgc ggcaagatgt accctgacct	120
ggaggagaag agcggcgggg gcgctcaggc cagcgccgcc gccgtcgtcc tcggcggttg	180
ccctgagacg aagaaggcgg cgcagttcga ggcggcgggc gaggccggtca	240
cggctgcagc tgcgg	255
<210> 9	
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<212> DNA	
<213> Zea mays	
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<221> misc\_feature  
 <222> (1)...(15)  
 <223> Maize promoter element  
  
 <400> 9  
 aaattagcag agggga 15  
  
 <210> 10  
 <211> 10  
 <212> DNA  
 <213> Zea mays  
  
 <220>  
 <221> misc\_feature  
 <222> (1)...(10)  
 <223> Maize promoter element  
  
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 tatgagatga 10  
  
 <210> 11  
 <211> 10  
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 <220>  
 <221> misc\_feature  
 <222> (1)...(10)  
 <223> Maize promoter element  
  
 <400> 11  
 cgatcgacaa 10  
  
 <210> 12  
 <211> 9  
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 <220>  
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 <222> (1)...(9)  
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 <400> 12  
 ggcacaaga 9  
  
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gatatagat	9	
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<210> 18 <211> 19 <212> DNA		

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer

<400> 18

actatagggc acgcgtggt

19